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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM and STATE RECLAIMED  
WATER DISCHARGE PERMIT NO. WA0040762

State of Washington  
DEPARTMENT OF ECOLOGY  
Olympia, Washington 98504-8711

In compliance with the provisions of  
The State of Washington Water Pollution Control Law  
Chapters 90.48 and 90.46 Revised Code of Washington  
and  
The Federal Water Pollution Control Act  
(The Clean Water Act)  
Title 33 United States Code, Section 1251 et seq.

State of Washington  
DEPARTMENT OF HEALTH  
Olympia, Washington 98504-7822

In compliance with the provisions of  
Chapters 90.43 and 90.46 Revised Code of Washington

City of Yelm  
105 Yelm Avenue West  
P.O. Box 479  
Yelm, WA 98597-4079

|  |   |
|--|---|
| <u>Plant Location:</u> 931 N.P. Road NE  | <u>Receiving Water:</u> Nisqually River/Ground Water  |
| <u>Waterway Segment Number:</u> 16-11-01   | <u>Discharge Location:</u>  |
| <u>Water Body I.D. No.:</u> WA-11-1020   | <b><u>Reclaimed Water</u></b> distribution for public and private uses throughout the City to include irrigation, constructed wetlands, and rapid infiltration basins.  |
| <u>Plant Type:</u><br>STEP collection followed by secondary treatment (SBRs), and coagulation and flocculation with filtration to meet Class A reclaimed water requirements. | <b><u>Power Canal</u></b> (Standby Outfall)<br>Latitude: 46° 57' 15" N<br>Longitude: 122° 35' 00" W<br><b><u>Nisqually River</u></b> (Emergency Outfall Only)<br>Latitude: 46° 57' 30" N<br>Longitude: 122° 34' 30" W |

is authorized to discharge in accordance with the special and general conditions that follow.

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Keli McKay  
Southwest Region Manager  
Water Quality Program  
Washington State Department of Ecology

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## GENERAL CONDITIONS

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### SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

| Permit Section | Submittal   | Frequency                               | First Submittal Date  |
|----------------|---|---|---|
| S2.E           | Monitoring well location and design scope of work         | 1 per site                              | Prior to well installation  |
| S3.A           | Discharge Monitoring Report                               | Monthly                                 | 15 <sup>th</sup> day of the month following completed monitoring period |
| S3.I.3         | Notice of Change in Authorization                         | As necessary                            |   |
| S4.B           | Plan for Maintaining Adequate Capacity                    | As necessary                            |   |
| S4.C           | Notification of New or Altered Sources                    | As necessary                            |   |
| S4.D           | Infiltration and Inflow Evaluation                        | Annually                                | March 25, 2000  |
| S4.E           | Annual Assessment of Flow & Waste Load                    | Annually                                | March 25, 2000  |
| S5.F           | Summary Report for Maintenance of Septic Tanks            | 1/permit cycle                          | 180 days before permit expiration                                       |
| S5.H.          | Updated Operations & Maintenance Manual                   | As necessary                            |   |
| S6.D           | Solids Management Plan Update                             | 1/permit cycle                          | 180 days before permit expiration                                       |
| S7.2           | Industrial Survey   | 1/permit cycle                          | 180 days before permit expiration                                       |
| S8.            | Outfall Evaluation  | #001 daily,<br>#002 and<br>#003 monthly | Report monthly on DMRs  |
| S9.            | Receiving Water Study Sampling and Quality Assurance Plan | 1/permit cycle                          | 180 days from the effective date of this permit.                        |
| S9.            | Receiving Water Study Results                             | 1/permit cycle                          | 180 days before permit expiration                                       |
| S10.A          | Water Reuse Plan  | Update as necessary                     |   |
| S10.B(4)       | Reclaimed Water Use Agreements                            | Prior approval by Ecology and Health    |   |
| S10.F(2)       | Annual Cross-Connection Control Report                    | Annually                                | March 25, 2000  |
| G6.            | Application for permit renewal                            | 1/permit cycle                          | 180 days before permit expiration                                       |

## SPECIAL CONDITIONS

### S1. DISCHARGE LIMITATIONS

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

#### A. Effluent Limitations Outfall #001 - Reclaimed Water

All reclaimed water shall be applied in accordance with the use area restrictions, setbacks and signage outlined in the State Water Reclamation and Reuse Standards.

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to provide Class A reclaimed water to public or private vendors for purposes such as, but not limited to, landscape irrigation, constructed wetlands discharge and ground water recharge subject to the following limitations:

|  | <b>EFFLUENT LIMITATIONS: Outfall #001 - Reclaimed Water</b> |                                   |                                   |
|--|---|-----------------------------------|-----------------------------------|
| <b>Parameter</b>   | <b>Discharge<br/>Average Monthly<sup>a</sup></b>            | <b>Average Weekly<sup>a</sup></b> | <b>Maximum Daily<sup>b</sup></b>  |
| BOD <sub>5</sub>   | 30 mg/L,<br>250 lbs/day                                     | N/A                               | N/A                               |
| Total Suspended Solids   | 30 mg/L,<br>250 lbs/day                                     | N/A                               | N/A                               |
| Dissolved Oxygen   | Shall be present in the discharge                           |                                   |                                   |
| pH   | Shall not be outside the range of 6.0 to 9.0 standard units |                                   |                                   |
| Total Nitrogen, as the sum of TKN, Nitrate and Nitrite   | 10 mg/L   | N/A                               | N/A                               |
| <b>Parameter</b>   | <b>Average Monthly<sup>a</sup></b>                          | <b>7-Day Limit<sup>a</sup></b>    | <b>Sample Maximum<sup>c</sup></b> |
| Total Coliform Bacteria  | N/A   | 2.2 count/100 mL                  | 23 count/100 mL                   |
| Turbidity  | 2 NTU   | N/A                               | 5 NTU                             |
| <sup>a</sup> The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of the weekly average for total coliform, which shall be based on the maximum median number of total coliform from the bacteriological results of the last seven days for which analyses have been completed.  |   |                                   |                                   |
| <sup>b</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.   |   |                                   |                                   |
| <sup>c</sup> The sample maximum for total coliform is the highest allowable value for any sample, and for turbidity the highest allowable validated or official measurement.<br>A validated or official measurement for a turbidimeter varies by manufacturer and operator settings, but the basic concepts are the same. Before a continuous reading turbidimeter will recognize and record a turbidity measurement there must first be a minimum number of consecutive measurements the have the same value or not be different in value by more than a specified percent. |   |                                   |                                   |

A chlorine residual of at least 0.5 mg/L shall be maintained in the reclaimed water during conveyance to the use area, or the storage pond if reclaimed water is not directly piped to the use area. This requirement is designed to protect the distribution system from clogging due to microbial slime build-up.

B. Effluent Limitations Outfall #002 - Centralia Power Canal

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge municipal wastewater at the permitted location subject to the following limitations:

Whenever flow in the Power Canal drops below 200 cfs the City of Yelm must cease discharging effluent to the Centralia Power Canal.

| <b>EFFLUENT LIMITATIONS: OUTFALL # 002-<br/>Centralia Power Canal</b>   |   |                                   |
|---|---|-----------------------------------|
| <b>Parameter</b>  | <b>Average Monthly<sup>a</sup></b>                          | <b>Average Weekly<sup>a</sup></b> |
| BOD <sub>5</sub> <sup>(1)</sup>   | 30 mg/L, 250 lbs/day  | 45 mg/L, 375 lbs/day              |
| Total Suspended Solids <sup>(1)</sup>   | 30 mg/L, 250 lbs/day  | 45 mg/L, 375 lbs/day              |
| Fecal Coliform Bacteria   | 100 count/100 mL  | 200 count/100 mL                  |
| pH  | Shall not be outside the range of 6.0 to 9.0 standard units |                                   |
| Total Residual Chlorine <sup>b</sup>  | 0.5 mg/L  | 0.75 mg/L                         |
| Total Ammonia (as NH <sub>3</sub> -N)   | 3.0 mg/L  | N/A                               |
| <sup>a</sup> The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.  |   |                                   |
| <sup>b</sup> The technology-based monthly average limitation for chlorine is derived from standard operating practices. The Water Pollution Control Federation's Chlorination of Wastewater (1976) states that a properly designed and maintained wastewater treatment plant can achieve adequate disinfection if a 0.5 mg/liter chlorine residual is maintained after fifteen minutes of contact time. See also Metcalf and Eddy, Wastewater Engineering, Treatment, Disposal and Reuse, Third Edition, 1991. A treatment plant that provides adequate chlorination contact time can meet the 0.5 mg/liter chlorine limit on a monthly average basis. According to Washington Administrative Code (WAC) 173-221-030(11)(b), the corresponding weekly average is 0.75 mg/liter. |   |                                   |
| Total available (residual) chlorine shall be minimized. Residual chlorine discharged to the power canal shall not exceed the amount required to achieve the fecal coliform limits specified above.  |   |                                   |

<sup>(1)</sup> The Permittee will be presumed to be in compliance with the percent removal requirement in the permit if the permit effluent concentration is met and there is no excessive inflow and infiltration (I/I). Infiltration is excessive when the highest 7-14 day average daily dry weather flow is greater than 120 gallons per capita per day. Inflow is excessive when the highest recorded daily flow during a storm event is greater than 275 gallons per capita per day or when hydraulic overloading of the treatment plant occurs.

C. Effluent Limitations Outfall #003 - Nisqually River

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge municipal wastewater at the permitted location as an emergency backup subject to the following limitations:

| <b>EFFLUENT LIMITATIONS: OUTFALL # 003-<br/>Nisqually River</b>  |   |                                   |
|--|---|-----------------------------------|
| <b>Parameter</b>   | <b>Average Monthly<sup>a</sup></b>                          | <b>Average Weekly<sup>a</sup></b> |
| BOD <sub>5</sub> <sup>(1)</sup>  | 30 mg/L, 250 lbs/day  | 45 mg/L, 375 lbs/day              |
| Total Suspended Solids <sup>(1)</sup>  | 30 mg/L, 250 lbs/day  | 45 mg/L, 375 lbs/day              |
| Fecal Coliform Bacteria  | 100 count/100 mL  | 200 count/100 mL                  |
| pH   | Shall not be outside the range of 6.5 to 8.5 standard units |                                   |
| Total Ammonia (as NH <sub>3</sub> -N)  | 3.0 mg/L  | N/A                               |
| <b>Parameter</b>   | <b>Average Monthly<sup>a</sup></b>                          | <b>Maximum Daily<sup>b</sup></b>  |
| Total Residual Chlorine <sup>c</sup>   | 0.028 mg/L  | 0.076 mg/L                        |
| <sup>a</sup> The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken with the exception of fecal coliform, which is based on the geometric mean.   |   |                                   |
| <sup>b</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. |   |                                   |
| <sup>c</sup> Total available (residual) chlorine shall be minimized. Residual chlorine discharged to the Nisqually River shall not exceed the amount required to achieve the fecal coliform limits specified above.  |   |                                   |

<sup>(1)</sup> The Permittee will be presumed to be in compliance with the percent removal requirement in the permit if the permit effluent concentration is met and there is no excessive inflow and infiltration (I/I). Infiltration is excessive when the highest 7-14 day average daily dry weather flow is greater than 120 gallons per capita per day. Inflow is excessive when the highest recorded daily flow during a storm event is greater than 275 gallons per capita per day or when hydraulic overloading of the treatment plant occurs.

D. Ground Water Recharge Criteria for Ground Water Recharge by Surface Percolation of Class A Reclaimed Water.

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge Class A Reclaimed Water to infiltration basins for surface percolation at locations described in the approved facility plan subject to the following limitations:

|  | <b>GROUND WATER LIMITATIONS: Ground Water Recharge Criteria for Ground Water Recharge by Surface Percolation</b> |
|--|--|
| <b>Parameter</b>   | <b>Sample Maximum<sup>a</sup></b>  |
| Nitrate (as N)   | 10 mg/L  |
| Nitrite (as N)   | 1.0 mg/L   |
| Fluoride   | 4.0 mg/L   |
| Arsenic  | 50 µg/L  |
| Cadmium  | 5 µg/L   |
| Chromium   | 100 µg/L   |
| Mercury  | 2 µg/L   |
| Nickel   | 100 µg/L   |
| Total Trihalomethanes (TTHM)   | 0.10 mg/L  |
| <sup>a</sup> The sample maximum is the highest allowable concentration for any sample as measured in the ground water at the top of the uppermost aquifer beneath or down gradient of the infiltration site. |  |

- E. Additional Ground Water Limitations for Ground Water Recharge by Surface Percolation of Class A Reclaimed Water.

Beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge Class A Reclaimed Water to infiltration basins for surface percolation at locations described in the approved facility plan subject to the following limitations:

|  | <b>ADDITIONAL GROUND WATER LIMITATIONS: Ground Water Recharge Criteria for Ground Water Recharge by Surface Percolation</b> |
|--|---|
| <b>Parameter</b>   | <b>Sample Maximum<sup>a</sup></b>   |
| Total Dissolved Solids   | 500 mg/L  |
| Chloride   | 250 mg/L  |
| Sulfate  | 250 mg/L  |
| Copper   | 1300 µg/L   |
| Lead   | 15 µg/L   |
| Manganese  | 50 µg/L   |
| Silver   | 100 µg/L  |
| Zinc   | 5000 µg/L   |
| <sup>a</sup> The sample maximum is the highest allowable concentration for any sample as measured in the ground water at the top of the uppermost aquifer beneath or down gradient of the infiltration site. |   |



F. Mixing Zone Descriptions

The maximum boundaries of the mixing zones are defined as follows:

Outfall #002 - Discharge to the Centralia Power Canal - The entire canal extending to the point at which the canal flow re-enters the Nisqually River (RM 12.6).

Outfall #003 - Discharge to the by-pass section of the Nisqually River at the Yelm Diversion Hydroelectric Project

Chronic Mixing Zone: 19.7 feet wide, extends 301.5 feet downstream and 100.0 feet upstream.

Acute Mixing Zone: 19.7 feet wide, extends 30.15 feet downstream and 10.0 feet upstream.

**S2. MONITORING REQUIREMENTS**

A. Influent Sampling

The sampling point for the influent will be at the influent meter vault just prior to the influent structure or tower.

The Permittee shall monitor the wastewater influent according to the following schedule:

| Parameter                      | Units | Minimum Sampling Frequency | Sample Type       |
|--------------------------------|-------|----------------------------|-------------------|
| Flow                           | MGD   | continuous                 | measurement       |
| BOD <sub>5</sub>               | mg/L  | 2/week                     | 24-hour composite |
| TSS                            | mg/L  | 2/week                     | 24-hour composite |
| TKN (as N)                     | mg/L  | monthly                    | 24-hour composite |
| Nitrate NO <sub>3</sub> (as N) | mg/L  | monthly                    | 24-hour composite |
| Nitrite NO <sub>2</sub> (as N) | mg/L  | monthly                    | 24-hour composite |

B. Monitoring Schedule: Outfall #001 - Reclaimed Water Discharge

The sampling point for the reclaimed water effluent will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well.

The Permittee shall monitor the wastewater according to the following schedule:

| Parameter  | Units          | Minimum Sampling Frequency | Sample Type                            |
|--|----------------|----------------------------|--|
| Flow   | MGD            | continuous                 | totalizer                              |
| BOD <sub>5</sub>   | mg/L           | 2/week                     | 24-hour composite                      |
| TSS  | mg/L           | 2/week                     | 24-hour composite                      |
| Total Coliform Bacteria <sup>a</sup>   | cfu/100mL      | daily                      | grab                                   |
| Turbidity <sup>b</sup>   | NTU            | recorded every 4 hours     | continuous recording turbidimeter      |
| Total Residual Chlorine <sup>c</sup>   | mg/L           | continuous                 | continuous recording chlorine analyzer |
| Dissolved Oxygen <sup>d</sup>  | mg/L           | daily                      | grab                                   |
| pH   | Standard Units | daily                      | measurement                            |
| Temperature  | °C             | daily                      | measurement                            |
| Hardness (as CaCO <sub>3</sub> )   | mg/L           | monthly                    | grab                                   |
| TKN (as N)   | mg/L           | monthly                    | 24-hour composite                      |
| Nitrate NO <sub>3</sub> (as N)   | mg/L           | monthly                    | 24-hour composite                      |
| Nitrite NO <sub>2</sub> (as N)   | mg/L           | monthly                    | 24-hour composite                      |
| Total Dissolved Solids   | mg/L           | monthly                    | measurement                            |
| Alkalinity (CaCO <sub>3</sub> )  | mg/L           | monthly                    | 24-hour composite                      |
| Conductivity   | umhos/cm       | monthly                    | 24-hour composite                      |
| Chloride   | mg/L           | monthly                    | 24-hour composite                      |
| Flouride   | mg/L           | monthly                    | 24-hour composite                      |
| Sulfate  | mg/L           | monthly                    | 24-hour composite                      |
| Total Metals: Arsenic, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Silver, Zinc <sup>(3)</sup>  | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Total Trihalomethanes (TTHM)   | mg/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Priority Pollutant Scan  | mg/L           | yearly <sup>(2)</sup>      | 24-hour composite                      |
| <sup>a</sup> Grab samples for coliform organisms shall be collected at a time when wastewater characteristics are most demanding on the treatment facilities and disinfection procedures.  |                |                            |  |
| <sup>b</sup> Turbidity analysis shall be performed by a continuous recording turbidimeter and shall be read and recorded at least every four hours.  |                |                            |  |
| <sup>c</sup> Total residual chlorine analysis shall be performed by a continuous recording chlorine analyzer and shall be read at the same time as the total coliform sample is collected. |                |                            |  |
| <sup>d</sup> Grab samples for dissolved oxygen shall be collected at least daily and at a time when wastewater characteristics are most demanding on the treatment facilities.             |                |                            |  |

<sup>(1)</sup> Quarterly is defined as: March, June, September, and December

<sup>(2)</sup> Yearly is defined as March

<sup>(3)</sup> Analytical method: Arsenic, EPA 206.3 or 206.2; Cadmium, EPA 2007.7 or 213.2; Chromium, EPA 200.7 or 218.2; Copper, EPA 200.7 or 220.2; Lead, EPA 239.2 or 239.2; Mercury, EPA 245.1 or 245.2; Nickel, EPA 249.2; Silver, EPA 272.2; Zinc, EPA 200.7 or 289.1

C. Monitoring Schedule: Outfall #002 - Centralia Power Canal

The sampling point for the surface water discharge to the Centralia Power Canal will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well. The sampling point for total residual chlorine will be in the surface water discharge line from the reclaimed water wet well.

The Permittee shall monitor the wastewater according to the following schedule:

| Parameter   | Units          | Minimum Sampling Frequency | Sample Type                            |
|---|----------------|----------------------------|--|
| Flow  | MGD            | continuous                 | totalizer                              |
| BOD <sub>5</sub>  | mg/L           | 2/week                     | 24-hour composite                      |
| TSS   | mg/L           | 2/week                     | 24-hour composite                      |
| pH  | Standard Units | daily                      | measurement                            |
| Fecal Coliform Bacteria <sup>a</sup>  | cfu/100mL      | 2/week                     | grab                                   |
| Dissolved Oxygen  | mg/L           | daily                      | measurement                            |
| Total Residual Chlorine   | mg/L           | continuous                 | continuous recording chlorine analyzer |
| Temperature   | °C             | daily                      | measurement                            |
| Hardness (as CaCO <sub>3</sub> )  | mg/L           | monthly                    | grab                                   |
| Total Ammonia (as NH <sub>3</sub> -N)   | mg/L           | monthly                    | 24-hour composite                      |
| Cadmium <sup>(3)</sup>  | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Copper <sup>(3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Lead <sup>(3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Mercury <sup>(3)</sup>  | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| Zinc <sup>(3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | 24-hour composite                      |
| <sup>a</sup> Testing for fecal coliform bacteria will not be required as long as each daily result from the total coliform bacteria test for the effluent is less than the monthly average permit limit set for fecal coliform. When any result for total coliform exceeds the monthly limit for fecal coliform, the fecal coliform test shall be performed a minimum of twice a week until each result from the last 7 test for total coliform are less than the fecal coliform monthly limit. |                |                            |  |

<sup>(1)</sup> Quarterly is defined as: March, June, September, and December

<sup>(2)</sup> Yearly is defined as March

<sup>(3)</sup> Analytical method: Arsenic, EPA 206.3 or 206.2; Cadmium, EPA 2007.7 or 213.2; Chromium, EPA 200.7 or 218.2; Copper, EPA 200.7 or 220.2; Lead, EPA 239.2 or 239.2; Mercury, EPA 245.1 or 245.2; Nickel, EPA 249.2; Silver, EPA 272.2; Zinc, EPA 200.7 or 289.1

D. Monitoring Schedule: Outfall #003 - Nisqually River

The sampling point for the surface water discharge to the Nisqually River will be the exit from the chlorine contact chamber prior to entering the reclaimed water wet well. The sampling point for total residual chlorine will be in the surface water discharge line from the reclaimed water wet well after SO<sub>2</sub> addition and far enough in the discharge line to allow for the proper SO<sub>2</sub> contact time.

The following constituents shall be monitored at the frequency and with the type of measurement indicated. If no discharge occurs during the entire monitoring period, it shall be stated on the Discharge Monitoring Report (DMR) Form that no discharge occurred.

| Parameter   | Units          | Minimum Sampling Frequency | Sample Type                            |
|---|----------------|----------------------------|--|
| Flow <sup>a</sup>   | MGD            | continuous                 | totalizer                              |
| BOD <sub>5</sub> <sup>b</sup>   | mg/L           | 2/week                     | 24-hour composite                      |
| TSS <sup>b</sup>  | mg/L           | 2/week                     | 24-hour composite                      |
| pH  | Standard Units | daily                      | measurement                            |
| Fecal Coliform Bacteria <sup>b</sup>  | cfu/100mL      | 2/week                     | grab                                   |
| Dissolved Oxygen  | mg/L           | daily                      | measurement                            |
| Total Residual Chlorine   | mg/L           | continuous                 | continuous recording chlorine analyzer |
| Temperature   | °C             | daily                      | measurement                            |
| Hardness (as CaCO <sub>3</sub> )  | mg/L           | monthly                    | grab                                   |
| Total Ammonia (as NH <sub>3</sub> -N) <sup>c</sup>  | mg/L           | monthly                    | grab                                   |
| Cadmium <sup>d (3)</sup>  | ug/L           | quarterly <sup>(1)</sup>   | grab                                   |
| Copper <sup>d (3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | grab                                   |
| Lead <sup>d (3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | grab                                   |
| Mercury <sup>d (3)</sup>  | ug/L           | quarterly <sup>(1)</sup>   | grab                                   |
| Zinc <sup>d (3)</sup>   | ug/L           | quarterly <sup>(1)</sup>   | grab                                   |
| <sup>a</sup> The average flow rate (million gallons per day), the daily maximum flow (maximum volume discharged during a 24-hour period) and the total flow (million gallons) during the reporting period shall be reported. The date and time of the start and termination of each discharge shall be reported.  |                |                            |  |
| <sup>b</sup> If the discharge is less than three days in duration a minimum of one sample shall be taken during the discharge, if the discharge is greater than 3 days in duration a minimum of two samples shall be taken during the first week and two each following week. All of the samples collected during the 7-day or 30-day period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.<br>Testing for fecal coliform bacteria will not be required as long as each daily result from the total coliform bacteria test for the effluent is below the monthly average permit limit set for fecal coliform. When any result for total coliform exceeds the monthly limit for fecal coliform, the fecal coliform test shall be performed a minimum of twice a week until each result from the last 7 test for total coliform are below the fecal coliform monthly limit. |                |                            |  |
| <sup>c</sup> A minimum of one sample shall be taken during any discharge. If the discharge is greater than one month in duration samples shall be taken a minimum of once a month. All of the samples collected during the sampling period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.   |                |                            |  |

<sup>d</sup> A minimum of one sample shall be taken during any discharge. If the discharge is greater than three months in duration samples shall be taken a minimum of once every three months. All of the samples collected during the sampling period are to be used in determining the averages. If only one sample is collected during the period, it must be considered the same as the average for that period. The permittee always has the option of collecting additional samples if appropriate.

<sup>(1)</sup> Quarterly is defined as: March, June, September, and December

<sup>(2)</sup> Yearly is defined as March

<sup>(3)</sup> Analytical method: Arsenic, EPA 206.3 or 206.2; Cadmium, EPA 2007.7 or 213.2; Chromium, EPA 200.7 or 218.2; Copper, EPA 200.7 or 220.2; Lead, EPA 239.2 or 239.2; Mercury, EPA 245.1 or 245.2; Nickel, EPA 249.2; Silver, EPA 272.2; Zinc, EPA 200.7 or 289.1

E. Monitoring Schedule: Ground Water Recharge by Surface Percolation

The sampling point for ground water monitoring will be in monitoring wells located near each infiltration site. The number, location, and construction of monitoring wells shall be approved by the Department of Ecology prior to installation.

Ground water purging and sampling shall follow the protocol described in Chapter 5 of Ecology's Implementation Guidance for the Ground Water Quality Standards (Publication #96-02).

| Parameter   | Units                | Minimum Sampling Frequency | Sample Type |
|---|----------------------|----------------------------|-------------|
| Static well water level elevation   | feet above sea level | quarterly <sup>(1)</sup>   | measurement |
| Temperature   | °C                   | quarterly <sup>(1)</sup>   | measurement |
| Dissolved Oxygen  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| pH  | Standard Units       | quarterly <sup>(1)</sup>   | measurement |
| Conductivity  | umhos/cm             | quarterly <sup>(1)</sup>   | grab        |
| Nitrate NO <sub>3</sub> (as N)  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| Nitrite NO <sub>2</sub> (as N)  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| TKN (as N)  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| Total Dissolved Solids  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| Total Coliform Bacteria   | cfu/100mL            | quarterly <sup>(1)</sup>   | grab        |
| Chloride  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |
| Cations/Anions: Calcium, Magnesium, Potassium, Sodium, Bicarbonate, Carbonate, Fluoride, sulfate                | mg/L                 | yearly <sup>(2)</sup>      | grab        |
| Total Metals: Arsenic, Cadmium, Chromium, Copper, Lead, Manganese, Mercury, Nickel, Silver, Zinc <sup>(3)</sup> | ug/L                 | yearly <sup>(2)</sup>      | grab        |
| Total Trihalomethanes (TTHM)  | mg/L                 | quarterly <sup>(1)</sup>   | grab        |

<sup>(1)</sup> Quarterly is defined as: March, June, September, and December

<sup>(2)</sup> Yearly is defined as March

<sup>(3)</sup> Analytical method: Arsenic, EPA 206.3 or 206.2; Cadmium, EPA 2007.7 or 213.2; Chromium, EPA 200.7 or 218.2; Copper, EPA 200.7 or 220.2; Lead, EPA 239.2 or 239.2; Mercury, EPA 245.1 or 245.2; Nickel, EPA 249.2; Silver, EPA 272.2; Zinc, EPA 200.7 or 289.1

F. Monitoring Schedule: Sludge

The Permittee shall monitor sludge according to the following schedule:

| Parameter    | Units | Sample Point                 | Minimum Sampling Frequency   | Sample Type |
|--------------|-------|------------------------------|------------------------------|-------------|
| Sludge depth | feet  | equalization basin           | 2/permit term <sup>(1)</sup> | measurement |
| Sludge depth | feet  | Individual STEP Septic Tanks | once every 3 years           | measurement |

<sup>(1)</sup> Sludge depth shall be measured in the equalization basin during March 2000, and again during March 2002. If there is an accumulation of sludge in the equalization basin, sludge depth shall be measured again in March 2004.

**S3. REPORTING AND RECORDKEEPING REQUIREMENTS**

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Departments of Ecology (Department) and Health shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during the previous month shall be summarized and reported on a form provided, or otherwise approved, by the Department, and be received no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall be submitted no later than 45 days following the monitoring period. The report(s) shall be sent to the Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775 and the Department of Health, 1500 West 4<sup>th</sup> Avenue, Suite 305, Spokane, Washington 99204.

All lab reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/ number, method detection limit (MDL), lab practical quantitation limit (PQL), reporting units and concentration detected.

DMR forms must be submitted monthly for each outfall whether or not the facility was discharging. If there was no discharge at an outfall during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Representative Sampling

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets and maintenance-related conditions affecting effluent quality.

E. Test Procedures

Sampling and analytical methods used to meet the water and wastewater monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department.

F. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

G. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Crops, soils, and hazardous waste data are exempted from this requirement pending accreditation of laboratories for analysis of these media by the Department.

H. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2. of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's self-monitoring reports.

I. Signatory Requirements

All applications, reports, or information submitted to the Department shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or a ranking elected official.
2. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described above and submitted to the Department, and
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph B.2. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of B.2. must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
4. Certification. Any person signing a document under this section shall make the following certification: "I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with



a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

#### **S4. FACILITY LOADING**

##### **A. Design Criteria**

Flows or waste loadings of the following design criteria for the permitted treatment facility shall not be exceeded:

Average flow for the maximum month: 1.0 MGD

BOD<sub>5</sub> loading for maximum month: 2,000 ppd

TSS loading for maximum month: 430 ppd

##### **B. Plans for Maintaining Adequate Capacity**

When the actual flow or wasteload reaches 85 percent of any one of the design criteria in S4.A. for three consecutive months, or when the projected increases would reach design capacity within five years, whichever occurs first, the Permittee shall submit to the Department, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.
2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
3. Limitation on future sewer extensions or connections or additional wasteloads.
4. Modification or expansion of facilities necessary to accommodate increased flow or wasteload.
5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or wasteload.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," be consistent with the engineering report requirements of the reclamation standards, and be approved by the Departments of Ecology and Health (Department) prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Notification of New or Altered Sources

The Permittee shall submit written notice to the Department whenever any new discharge or increase in volume or change in character of an existing discharge into the sewer is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the collection or treatment system; (2) is not part of an approved general sewer plan or approved plans and specifications; or would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the system's ability to adequately transport and treat the added flow and/or wasteload.

D. Infiltration and Inflow Evaluation

1. The Permittee shall conduct an infiltration and inflow evaluation. Refer to the U.S.EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, WA, 98504-7600. Plant monitoring records may be used to assess measurable infiltration and inflow.
2. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the first report based on equivalent rainfall, the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.
3. The report shall be submitted by March 25, 2000 and annually thereafter.

E. Wasteload Assessment

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to the Department by March 25, 2000 and annually thereafter. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average dry weather and wet weather flows, peak flows, BOD, and total suspended solids loadings; and (except for the first report) the percentage increase in these parameters since the last annual report. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above. The interval for review and reporting may be modified if the Department determines that a different frequency is sufficient.

**S5. OPERATION AND MAINTENANCE**

The Permittee shall at all times be responsible for the proper operation and maintenance of any facilities or systems of control installed to achieve compliance with the terms and conditions of the permit.

A. Certified Operator

In accordance with Chapter 173-230 WAC, the Permittee shall provide an adequate operating staff which is qualified to carry out the operation, maintenance, and testing activities required to ensure compliance with the conditions of this permit. An operator certified for at least a Class III plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class II plant shall be in charge during all regularly scheduled shifts when operational changes are made to the treatment process.

B. O & M Program

The Permittee shall institute an adequate operation and maintenance program for their entire sewage system. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to the Department, if possible, 30 days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. If such a reduction involves a bypass, the requirements of S5.H apply. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The Permittee shall maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant, which requires primary sedimentation and disinfection at a minimum during power outage periods.

E. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. Maintenance of Septic Tanks

Sludge depth and scum thickness in each septic tank measured during the previous month shall be reported with the DMRs. All tanks shall be inspected and measured at least once every three years and a summary report submitted. The report shall include an analysis of the tanks and pumps serviced, repaired or replaced and a proposed pump servicing and solids removal rate for all STEP tanks. The summary report is due with the application

for permit renewal. The contents of the tanks shall be removed when the clear space is one-third of the fluid depth or when the scum layer is within three inches of the bottom of the scum baffle.

G. Removal of Sludge from the Equalization Basin

Sludge shall be removed from the equalization basin when the average depth reaches one foot. If sludge accumulates to a depth greater than two and a half feet in any area of the basin, the solids shall be removed from the accumulated area or from the entire pond.

H. Operations and Maintenance Manual

The approved Operations and Maintenance (O&M) Manual shall be kept available at the treatment plant. The operation and maintenance manual shall be updated prior to the next permit cycle (5-years) and submitted for Department review. If there are major changes in the operation of the facility or the outfalls during the current permit cycle, then the O&M manual shall be revised and submitted for Department review. The operation and maintenance manual shall contain the plant process control monitoring schedule. All operators are responsible for being familiar with, and using this manual.

**S6. RESIDUAL SOLIDS**

A. Residual Solids Handling

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge, septage waste, and other solid waste. The Permittee shall store and handle, utilize, and dispose of all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

B. Leachate

The Permittee shall not allow leachate from their residual solids to enter state surface waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to violate the State Water Quality Standards, Chapter 173-201 WAC, or cause any adverse effect on state ground waters. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

C. Land Disposal or Utilization

Disposal or utilization of any residual solids on land shall be in accordance with the requirements of the jurisdictional health department.

D. Solids Management Plan

The Permittee shall comply with the solids management plan as approved by the Department. Any proposed revision or modification of the residual solids management plan shall be submitted to the Department for review and approval. The Permittee shall comply with any approved plan modifications. The Permittee shall submit an update of

the residual solids management plan with the application for permit renewal 180 days prior to the expiration date of this permit.

E. Applicable Federal Law

This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable standard or limitation promulgated under Section 405(d) (Disposal of Sewage Sludge) of the Clean Water Act, if the standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any condition in the permit; or
2. Controls any pollutant not limited in the permit.

The Permittee shall comply with the standard or limitation by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2)(D) of the Clean Water Act. The permit as modified or reissued under this paragraph shall contain any other requirement of the Act then applicable.

F. Permit Modification, Revocation, Reissuance

The Department may establish specific sludge management requirements beyond those identified in this permit by the permit modification or administrative order.

**S7. PRETREATMENT**

1. The Permittee shall work with the Department to ensure that all commercial and industrial users of the publicly owned treatment works (POTW) are in compliance with the pretreatment regulations promulgated in 40 CFR Part 403 and any additional regulations that may be promulgated under Section 307(b) (pretreatment) and 308 (reporting) of the Federal Clean Water Act.
2. As part of the EPA and State funding requirements, the Permittee is required to complete a sewer use ordinance. The ordinance shall include the Specific Prohibitions listed below in item S7.5. This ordinance shall be approved by the department and adopted by the City prior to completion of the certification period. The Permittee shall perform an industrial user survey prior to the next permit application period.
3. Significant commercial and industrial operations shall not be allowed to discharge wastes to the Permittee's sewerage system until they have received prior authorization from the Department in accordance with Chapter 90.48 Revised Code of Washington (RCW) and Chapter 173-216 WAC, as amended. The Permittee shall immediately notify the Department of any proposed new sources of wastewater from significant commercial or industrial operations.
4. In accordance with 40 CFR 403.5(a), the Permittee shall not authorize or knowingly allow the discharge of any pollutants into its POTW which cause pass through or interference, or which otherwise violates general or specific discharge prohibitions contained in 40 CFR Part 403.5 or WAC-173-216-060.

5. The Permittee shall not authorize or knowingly allow the introduction of any of the following into the its POTW:
  - a. Pollutants which create a fire or explosion hazard in the POTW (including, but not limited to waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21).
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, or greater than 11.0 standard units, unless the works are specifically designed to accommodate such discharges.
  - c. Solid or viscous pollutants in amounts that could cause obstruction to the flow in sewers or otherwise interfere with the operation of the POTW.
  - d. Any pollutant, including oxygen demanding pollutants, (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW.
  - e. Petroleum oil, nonbiodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through.
  - f. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity which may cause acute worker health and safety problems.
  - g. Heat in amounts that will inhibit biological activity in the POTW resulting in interference but in no case heat in such quantities such that the temperature at the POTW headworks exceeds 40<sup>0</sup>C (104<sup>0</sup>F) unless the Department, upon request of the Permittee, approves, in writing, alternate temperature limits.
  - h. Any trucked or hauled pollutants, except at discharge points designated by the Permittee.
  - i. Wastewaters prohibited to be discharged to the POTW by the Dangerous Waste Regulations (Chapter 173-303 WAC), unless authorized under the Domestic Sewage Exclusion (WAC 173-303-071).
6. The Permittee shall notify the Department if any industrial user violates the prohibitions listed in this section.

## **S8.    OUTFALL EVALUATION**

Outfall #001 Reclaimed Water Distribution - The Permittee shall inspect public uses and impoundment's of reclaimed water on at least a daily basis and private uses and impoundment's on at least a quarterly basis.

Outfall #002 Centralia Power Canal - The Permittee shall inspect the outfall line and discharge outfall once per month to document the integrity and continued function.

Outfall #003 Nisqually River - The Permittee shall inspect the outfall line and discharge location once per month and the Tideflex valve during lowflow conditions in the Nisqually River at least once per year, to document the integrity and continued function.

The Permittee shall note the inspections on the DMR in the notes section.

## **S9. RECEIVING WATER STUDY**

The Permittee shall collect receiving water information necessary to determine if the effluent has a reasonable potential to cause a violation of the water quality standards. If reasonable potential exists the Department will use this information to calculate effluent limits. All sampling and analysis shall be conducted in accordance with the guidelines given in *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, Ecology Publication #91-16. The Permittee shall submit a sampling and quality assurance plan for Department review and approval within 180 days of the effective date of this permit.

### **A. Receiving Water Analysis**

The Permittee shall sample and analyze the receiving water (Outfall #003 - Nisqually River) for BOD<sub>5</sub>, Dissolved Oxygen, Alkalinity, Total Ammonia, Total Kjeldahl Nitrogen, Hardness, Temperature, and pH. The following metals shall be analyzed for Dissolved Metals: Cadmium, Copper, Lead, Mercury, and Zinc. The time of sampling shall be as close as possible to the time of critical period (August and September). The Permittee shall follow the clean sampling techniques (*Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA Publication No. 821-R-95-034, April 1995). The receiving water sampling location should be outside the zone of influence of the effluent. The Department considers ten receiving water samples to be the optimal data set and four to be the minimum for determining reasonable potential to cause a violation of the water quality standards. All chemical analysis shall be conducted according to methods given in 40 CFR 136 and shall have the following detection levels:

| POLLUTANT PARAMETER | DETECTION LIMIT REQUIRED |
|---------------------|--------------------------|
| Cadmium             | 0.1 µg/L                 |
| Copper              | 1.0 µg/L                 |
| Lead                | 1.0 µg/L                 |
| Mercury             | 0.2 µg/L                 |
| Zinc                | 4.0 µg/L                 |

Any subsequent sampling and analysis shall also meet these requirements. The Permittee may conduct a cooperative receiving water study with other NPDES Permittees discharging in the same vicinity. The Permittee shall submit the results of the study to the Department within 90 days of completing the effluent and receiving water studies.

#### **S10. RECLAIMED WATER USE**

The Permittee shall distribute reclaimed water to public/private entities under the conditions of a valid reclaimed water use agreement between all involved parties. No reclaimed water may be distributed by the permittee without a reclaimed water use agreement. All reclaimed water use agreements shall get prior approval by the Departments of Health and Ecology (Department) and shall be consistent with use area restrictions, setbacks and signage outlined within the State Water Reclamation and Reuse Standards.

The Permittee shall complete a City ordinance to include the policies and procedures for the distribution and delivery of reclaimed water to public and private entities. The ordinance shall also give the City proper authority to terminate service of reclaimed water from any customer violating the States Water Reclamation and Reuse Standards and restrictions outlined in the reclaimed water use agreement. This ordinance shall be approved by the Department and adopted by the City prior to the distribution of any reclaimed water.

##### **A. Water Reuse Plan**

The Permittee shall maintain an up-to-date water reuse plan, which shall contain, but not be limited to the following:

1. Description of the reuse force main and distribution system;
2. Identification of proposed uses and users and reuse sites, including an evaluation of reuse sites, estimated volume of water to be reused, means of application, application rates, water balance, expected agronomic uptake, potential to impact ground water or surface water at the site, background water quality and hydrogeological information necessary to evaluate potential water quality impacts;



3. Contingency plan to ensure that no untreated or inadequately-treated wastewater will be delivered to the use area;
4. Discussion of the cross-connection control and inspection program, including who will be responsible for compliance and testing of cross-connection control devices.

B. Use Area Responsibilities

1. The permittee shall maintain control over, and be responsible for, all facilities and activities inherent to the production of reclaimed water to ensure that the reclamation plant operates as approved by the Departments of Health and Ecology. The permittee shall control industrial and toxic discharges that may affect reclaimed water quality through either a delegated pretreatment program with the Department or assuring all applicable discharges have permits issued under RCW 90.48 and 173-220 WAC.
2. Where the reclaimed water use area is under direct control of the permittee, the permittee shall maintain control, and be responsible for, all facilities and activities inherent to the use of the reclaimed water to ensure that the entire reuse system operates as approved by the Departments of Health and Ecology.
3. Where the reclaimed water distribution system or use area is not under direct control of the Permittee, the person(s) who distributes reclaimed water, owns, or otherwise maintains control over the use area is responsible for reuse facilities and activities inherent to the distribution and use of the reclaimed water to ensure that the system operates as approved by the Departments of Health and Ecology.
4. Where the reclaimed water distribution system or use area is not under direct control of the permittee, a binding agreement among the parties involved is required to ensure that construction, operation, maintenance, and monitoring meet all requirements of the Departments of Health and Ecology. This agreement must be consistent with use area restrictions, setbacks and signage outlined within the State Water Reclamation and Reuse Standards, 1997. A copy of each use area agreement must be submitted to the Departments of Health and Ecology prior to implementation.

C. Operational Records and Reporting

1. Operating records shall be maintained at the reclamation plant or a central depository within the operating agency. These shall include: records of all analyses performed; records of operational problems, unit process and equipment breakdowns, and diversions to emergency storage or disposal; and all corrective or preventative action taken.
2. Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.

3. A monthly summary of operating records as specified above shall be submitted monthly to both Ecology and the Department of Health, 1500 West 4<sup>th</sup> Avenue, Spokane, WA 99204.
4. Any discharge of untreated or partially treated wastewater to the reclaimed water use area, and the cessation of this discharge, shall be reported within 24 hours by telephone, fax and/or voice mail to the Departments of Health and Ecology and to the local Health Department.

D. Maintenance

1. The reclamation facility shall at all times be maintained to ensure that all equipment is kept in reliable operating condition.
2. A chlorine residual of at least 0.5 mg/L shall be maintained in the reclaimed water during conveyance from the reclamation plant to the use area unless waived by the Departments of Health and Ecology. Maintenance of a chlorine residual is not required in reclaimed water impoundments and storage ponds, and, at the discretion of the Department, may not be required in reclaimed water distributed from storage ponds.

E. Bypass

There shall be no bypassing of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the point of use. All reclaimed water being distributed for reuse must meet Class A requirements at all times. Water not meeting Class A requirements must be retained for additional treatment or discharge to an alternate discharge point.

F. Department of Health Requirements

Department of Health specific conditions for reclaimed water generators are as follows:

1. In addition to Ecology copies of reclaimed water monitoring reports shall be submitted to the Department of Health at the following address: 1500 West 4<sup>th</sup> Avenue, Spokane, WA 99204.
2. An annual cross-connection control report shall be made to DOH by a certified Cross-Control Specialist I identifying all devices tested and any cross-connection incidents which occurred in the reuse system.
3. A standard notification sign shall be developed by the Permittee using colors and verbiage approved by DOH. The signs shall be used in all reclaimed water use areas, consistent with the Water Reclamation and Reuse Standards.

G. Irrigation Land Application

1. For any irrigation use of reclaimed water, the hydraulic loading rate of reclaimed water shall be determined based on a detailed water balance analysis. The calculated loading rate(s) and the parameters and methods used to determine the loading rate(s) shall be submitted to the Washington Departments of Health and Ecology for approval.

2. There shall be no runoff of reclaimed water applied to land to any surface waters of the state or to any land not owned by or under control of the Permittee.
3. There shall be no application of reclaimed water for irrigation purposes when the ground is saturated or frozen.
4. The Permittee shall use recognized good practices, and all available and reasonable procedures to control odors from the reclaimed water storage and land application system. When notified by the Department, the Permittee shall implement measures to reduce odors to a reasonable minimum.
5. The reclaimed water shall not be applied to the irrigation lands in quantities that:
  - a. Significantly reduce or destroy the long-term infiltration rate of the soil.
  - b. Cause long-term anaerobic conditions in the soil.
  - c. Cause ponding of the reclaimed water, breeding of vectors of health significance, the creation of odors, slimes, or aesthetically displeasing deposits.
  - d. Cause leaching losses of constituents of concern beyond the treatment zone or in excess of the approved design. Constituents of concern are constituents in the wastewater, partial decomposition products, or soil constituents that would alter ground water quality in amounts that would affect current and future beneficial uses.
6. The Permittee shall maintain all irrigation agreements for lands not owned for the duration of the permit cycle. The Permittee shall inform the Department in writing of any proposed changes to existing agreements.

H. Surface Percolation

1. Reclaimed water may be beneficially used for infiltration provided the reclaimed water complies with or exceeds standards for Class A reclaimed water and meets the ground water recharge criteria at the top of the uppermost aquifer beneath or down gradient of the infiltration site.
2. The secondary treatment process used to provide oxidized wastewater must include appropriate treatment to reduce the nitrogen content in the final reclaimed water.

3. Background/natural groundwater quality must be documented and sampling locations identified and approved by Ecology.
4. Additional water quality monitoring may be established for constituents found in reclaimed water for which drinking water criteria have not been established.
5. Surface waters shall not be impaired due to the infiltration of reclaimed water.

## **GENERAL CONDITIONS**

### **G1. RIGHT OF ENTRY**

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit;
- B. To have access to and copy at reasonable times any records that must be kept under the terms of the permit;
- C. To inspect at reasonable times any monitoring equipment or method of monitoring required in the permit;
- D. To inspect at reasonable times any collection, treatment, pollution management, or discharge facilities; and
- E. To sample at reasonable times any discharge of pollutants.

### **G2. PERMIT ACTIONS**

This permit shall be subject to modification, suspension, or termination, in whole or in part by the Department for any of the following causes:

- A. Violation of any permit term or condition;
- B. Obtaining a permit by misrepresentation or failure to disclose all relevant facts;
- C. A material change in quantity or type of waste disposal;
- D. A material change in the condition of the waters of the state; or
- E. Nonpayment of fees assessed pursuant to RCW 90.48.465.

The Department may also modify this permit, including the schedule of compliance or other conditions, if it determines good and valid cause exists, including promulgation or revisions of regulations or new information.

### **G3. REPORTING A CAUSE FOR MODIFICATION**

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports, whenever a material change in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least 60 days prior to any proposed changes. Submission of this application does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

**G4. PLAN REVIEW REQUIRED**

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications should be submitted at least 180 days prior to the planned start of construction. Facilities shall be constructed and operated in accordance with the approved plans.

**G5. COMPLIANCE WITH OTHER LAWS AND STATUTES**

Nothing in the permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

**G6. DUTY TO REAPPLY**

The Permittee must apply for permit renewal at least 180 days prior to the specified expiration date of this permit.

**G7. REMOVED SUBSTANCES**

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

**G8. TOXIC POLLUTANTS**

If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant and that standard or prohibition is more stringent than any limitation upon such pollutant in the permit, the Department shall institute proceedings to modify or revoke and reissue the permit to conform to the new toxic effluent standard or prohibition.

**G9. OTHER REQUIREMENTS OF 40 CFR**

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

**G10. ADDITIONAL MONITORING**

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

**G11. PAYMENT OF FEES**

The Permittee shall submit payment of fees associated with this permit as assessed by the Department. The Department may revoke this permit if the permit fees established under Chapter 173-224 WAC are not paid.

**G12. PENALTIES FOR VIOLATING PERMIT CONDITIONS**

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten

thousand dollars and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be and be deemed to be a separate and distinct violation.